

PATENT



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicants: Tobias H. Hollerer, *et al.*

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Title: METHODS, APPARATUS, AND DATA STRUCTURES FOR PROVIDING A USER INTERFACE, WHICH FACILITATES DECISION MAKING

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APPEAL BRIEF

Dear Sir:

Applicants submit this brief in triplicate in connection with an appeal of the above-identified patent application. Please charge \$320.00 for the fee associated with this brief to Deposit Account No. 50-1063 (Order No. MSFTP334US).

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I. Real Party in Interest (37 C.F.R. § 1.192(c)(1))

The real party in interest in the present appeal is Microsoft Corporation, the assignee of the present application.

II. Related Appeals and Interferences (37 C.F.R. § 1.192(c)(2))

Appellants, appellants' legal representatives, and/or the assignee of the present application are not aware of any appeals or interferences which will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims (37 C.F.R. § 1.192(c)(3))

Claims 1-5, 25-31, 39-42 and 50 are pending in the application. Claims 6-24, 32-38 and 43-49 were withdrawn from consideration. The rejection of claims 1-5, 25-31, 39-42 and 50 is appealed.

IV. Status of Amendments (37 C.F.R. § 1.192(c)(4))

No claim amendments have been made subsequent the final rejection October 8, 2002.

V. Summary of Invention (37 C.F.R. § 1.192(c)(5))

The present invention relates to a user interface that facilitates a decision making process in connection with an event, such as for example planning a trip. (*See e.g.*, p. 83, lines 1 - 2). The invention provides for presenting a uniform view of the event *via* employment of a plurality of windows to the event wherein each respective window depicts different types of information related to the event. (*See e.g.*, p. 15, line 20 - p.16, line 1). The information among the respective windows is linked such that changes to one type of information in one window are depicted in corresponding changes to the other types of information in the other windows. (*See e.g.*, p. 16, lines 1-3). Accordingly, the event can be viewed *via* perspectives of the multiple displayed information types corresponding to the event. Relationship information between information in the various windows can be visually depicted, for example using color and colored rays. (*See e.g.*, p. 16, lines 9 -11). The present invention can simulate a three dimensional environment

including different windows or planes having the different types of related information such that a unified view of the task (event) is presented to a user. (See e.g., p. 16, lines 20 – 22).

A methodology in accordance with the invention relates and displays information associated with a particular event using a plurality of windows so as to uniformly convey the event from multiple perspectives. (See e.g., Fig. 13 and p. 41, line 28 - p. 43, line 6). The event is depicted *via* the plurality of windows wherein respective windows show different information related to the event - the information type in respective windows are different per window, but they are related to the common event. (See e.g., p. 43, lines 2-4). The information is interrelated *via* visual links such that a change with respect to one type of information in a given window results in concurrent and corresponding changes to other types of information depicted in other windows. (See e.g., p. 42, line 29 - p. 43, line 1). Thus, the invention provides for uniform and dynamic viewing of an event *via* multiple perspectives (e.g., information related to the event are depicted *via* a plurality of windows and the information is linked). (See e.g., Fig. 13 and p. 41, line 28 - p. 43, line 6).

VI. Statement of the Issues (37 C.F.R. § 1.192(c)(6))

i. Whether claims 1-5, 25-31, 39-42 and 50 are unpatentable under 35 U.S.C. §103(a) over Goh (U.S. 5,678,015).

ii. Whether claims 1, 2, 5 and 50 are anticipated under 35 U.S.C. §102(a) over Horvitz, *et al.* (U.S. 5,880,733).

VII. Grouping of Claims (37 C.F.R. § 1.192(c)(7))

For the purposes of this appeal only, the claims are grouped as follows: Claims 1-5, 25-31 and 39, 41-42 and 50 stand or fall together.

VIII. Argument (37 C.F.R. § 1.192(c)(8))

i. Rejection of Claims 1-5, 25-31, 39-42 and 50 Under 35 U.S.C. §103(a)

Claims 1-5, 25-31, 39-42 and 50 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Goh (U.S. 5,678,015). Reversal of the rejection is respectfully requested for at least the following reasons. Goh does not provide a suggestion or motivation to incorporate the claim limitations, or teach or suggest all the claim limitations, as recited in the subject claims, and therefore, a *prima facie* case of obviousness cannot be established.

a. *Applicable Law*

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j).

b. *Goh fails to teach, suggest or motivate all the claim limitations of independent claims 1, 25, 31, 41 and 50*

In particular, Goh does not teach, suggest or motivate accepting *an event* and/or displaying a first window having *first information of a first type, the first information being related to the event* and a second window having *second information of a second type, the second information being related to the event*, as recited in independent claims 1, 25, 31, 41 and 50.

Goh teaches employing one or more four-dimensional graphical user interfaces (GUI) to *increase the effective area* of a workspace in order *to view more icons or applications*. (*See* col. 1, lines 9-11, col. 2, lines 29-30, and col. 6, lines 43-47). Goh discloses that utilizing the four-dimensional GUI can double the effective area in a two-dimensional display. (*See* col. 5, lines 31-32). Thus, Goh merely teaches a means to show more icons or applications within a two-

dimensional display. (See col. 2, lines 59-61). In contrast, applicant's invention employs multiple windows or planes within a display to provide a *uniform view of an event (e.g., a task) wherein different windows or planes in different or similar dimensions illustrate different types of information related to the event*. (See application, p. 16, lines 15-22).

Goh discloses *toggling* the visibility of the four-dimensional GUI within the desktop through a drop-down menu located on the desktop. (See col. 6, lines 16-19). When a user toggles to view the four-dimensional GUI, a polyhedron is revealed within the desktop. (See col. 6, lines 19-20). Each side of the polyhedron can then be (or not be) populated with icons or utilized for applications. When the user toggles the visibility to view the two-dimensional desktop, the polyhedron "disappears," and if any icons or applications were mapped to workspaces, then the icons and applications "reappear on the [two-dimensional] desktop." (See col. 6, lines 38-42). Thus, Goh provides the ability to *toggle* between a four-dimensional GUI and a two-dimensional display *to view the same icons or applications*, including no icons or applications if none were mapped, *in alternative representations* wherein one representation provides an increased effective area over the other. Goh's four-dimensional GUI is brought into view through toggling the graphical representation and is independent of an event. Thus, Goh is silent regarding accepting, responding to or providing a multiple window view related to *an event*.

Unlike Goh, applicant's claimed invention is not a mere means for toggling between two-dimensional and multi-dimensional orientations in order to increase the viewable workspace to view more icons or applications. Instead, applicant's claimed invention accepts an event, and then generates a display to provide multiple windows or planes in a three-dimensional environment, for example, to depict *different types of information related to the event* in different windows or planes to provide a uniform view of the event.

Goh's four-dimensional GUI comprises a polyhedron (e.g., a cube) with at least one translucent side to provide the ability to simultaneously view one or more sides of the polyhedron. (See col. 5, lines 14-20 and 33-36). As noted *supra*, the four-dimensional GUI becomes visible by toggling between a two-dimensional representation and the four-dimensional GUI, and is independent of an event. Each side of the polyhedron represents a workspace, or a *window*, that can be *populated (mapped) with a plurality of individual icons* for launching

(invoking, starting, initiating, *etc.*) applications (*See* col. 5, line 66) or *an application* (*See* col. 6, lines 7-8). When a side of the polyhedron is rendered translucent, the icons or applications from other sides of the polyhedron can be viewed simultaneously, thus providing a greater effective workspace by *superimposing translucent individual workspaces*. (*See* col. 5, lines 33-36). In contrast, applicant's claimed invention provides *planes or windows that display different type of information that are related to the event*.

Goh is silent regarding providing relationships between the contents of workspaces, and provides no motivation or suggestion to employ relationships since Goh merely teaches a means to increase the effective area of a workspace to view more icons and applications. Thus in Goh, an icon and/or application in a workspace is not related through an event to another icon and/or application in another workspace. In contrast, applicant's claimed invention can employ visuals to depict relationships between the contents of windows since the information in a window is a different type of event related information. For example, color and/or color rays can be employed. In addition, a change to the information type in one window can elicit a change in another window. (*See* application, p. 9, lines 1-15).

Goh teaches a four-dimensional representation of a two-dimensional view to simultaneously view independent workspaces with individual icons or applications (*e.g.*, superimposed translucent individual workspaces) in order to show more icons or applications. Goh does not teach, suggest, motivate or intimate providing a three-dimensional view of an event wherein each windows and planes provide a different type of information related to the event, as recited in the rejected independent claims.

Therefore, Goh does not provide teach or suggest all of the limitations of the rejected independent claims. Accordingly, the rejection of claims 1-5, 25-31, 39-42 and 50 should be reversed.

ii. Rejection of Claims 1, 2, 5 and 50 Under 35 U.S.C. §102(a)

Claims 1, 2, 5 and 50 stand rejected under 35 U.S.C. §102(a) as being anticipated Horvitz, *et al.* (US 5,880,733). Reversal of this rejection is respectfully requested for at least the following reason. Horvitz, *et al.* does not teach or suggest each and every element recited in the subject claims.

a. Applicable Law

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the...claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

b. Horvitz fails to disclose all the claim limitations of independent claims 1 and 50

As noted *supra*, independent claims 1 and 50 recite accepting an event and/or displaying a first window having first information of a first type, the first information *being related to the event* and a second window having second information of a second type, the second information being *related to the event*. Horvitz, *et al.* does not teach or suggest accepting an event and then generating a multi-dimensional view of the event wherein different types of related information are depicted in different windows, as recited in the subject claims. Instead, Horvitz, *et al.* provides a three-dimensional virtual workspace for a window based display system. (Col. 3, lines 3-5). In Horvitz, *et al.*, a user can activate / deactivate the transformation of a two-dimensional window to a three-dimensional perspective. (*See Abstract*). When activated, two-dimensional windows appear in three-dimensional space by performing a geometrical transformation that suitably orients and positions the two-dimensional windows in a three-dimensional isomeric space to convey the impression that the windows are three-dimensional. (*See col. 3, lines 11-21*).

Horvitz does not teach or suggest a connection or relationship between the information displayed in the windows and an event as in the claimed invention. It is respectfully submitted that the “user activation input” of Horvitz is not an “event”.

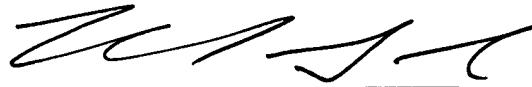
Accordingly, reversal of this rejection and allowance of claims 1 and 50, and claims 2 and 5 which depend therefrom, is respectfully requested.

IX. Conclusion

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited reference. Accordingly, it is respectfully requested that the rejections of claims 1-5, 25-31, 39-42 and 50 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 (Order No. MSFTP334US).

Respectfully submitted,
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X. Appendix of Claims (37 C.F.R. § 1.192(c)(9))

1. A man-machine interface method for assisting a user in a decision making process, for use with a machine having a video monitor device and a user input device, the man-machine interface method comprising steps of:
 - a) accepting an event from the user input device; and
 - b) generating a display for output on the video monitor device, the display including
 - i) a first window displaying first information of a first type, the first information being related to the event, and
 - ii) a second window displaying second information of a second type, the second information being related to the event.
2. The man-machine interface method of claim 1 wherein the display generated simulates a three-dimensional environment in which the first and second windows reside.
3. The man-machine interface method of claim 2 wherein the first and second windows are represented as sides of an unfolded geometric object.
4. The man-machine interface method of claim 2 wherein the first and second windows are represented as sides of an unfolded cube.
5. The man-machine interface method of claim 2 wherein each of the first and second windows include a maximize button,
wherein when the maximize button of the first window is selected, a display having the first window, arranged in normal, head-on, view, is generated, and
wherein when the maximize button of the second window is selected, a display having the second window, arranged in normal, head-on, view, is generated.

6. The man-machine interface method of claim 1 further comprising a step of:
 - c) generating a visual indicator for associating the first information of the first window and the second information of the second window.
7. The man-machine interface method of claim 6 wherein the visual indicator is selected from a group of visual indicators consisting of (a) a colored line, (b) a colored ray, and (c) a colored arc.
8. The man-machine interface method of claim 7 wherein the visual indicator is translucent.
9. The man-machine interface method of claim 1 wherein the first window includes alternative representations of the first information, each of which is related to the event.
10. The man-machine interface method of claim 9 wherein the first window depicts a calendar having a number of alternative time sequences, wherein the alternative representations of the first information may be an alternative time duration on each of the alternative time sequences.
11. The man-machine interface method of claim 1 further comprising a step of:
 - c) forming a search query based, at least in part, on contents of the event.
12. The man-machine interface method of claim 11 wherein the search query is further based, at least in part, on a user profile.
13. The man-machine interface method of claim 11 further comprising steps of:
 - d) returning a result of the search query;
 - e) determining whether the result includes any information of the first type or of the second type; and
 - f) if the result includes any information of the first type, generating a visual representation of such information on the first window, and if the result includes

any information of the second type, generating a visual representation of such information on the second window.

14. The man-machine interface method of claim 1 wherein the first window is a bulletin board, and

wherein a note, having contents entered by a user, is arranged on the bulletin board and defines the event.

15. The man-machine interface method of claim 1 wherein the first window is a map, and wherein a place of the map related to the event includes a marker.

16. The man-machine interface method of claim 15 wherein the marker is a colored circle.

17. The man-machine interface method of claim 16 wherein the marker is translucent.

18. The man-machine interface method of claim 16 wherein the second window is a bulletin board,

wherein a note, having contents entered by a user, is arranged on the bulletin board, defines the event, and has a color which matches the color of the marker.

19. The man-machine interface method of claim 1 wherein the first window is an information browser.

20. The man-machine interface method of claim 19 further comprising a step of:

c) forming a search query based, at least in part, on contents of the event.

21. The man-machine interface method of claim 20 wherein the search query is further based, at least in part, on a user profile.

22. The man-machine interface method of claim 20 further comprising steps of:
 - d) submitting the search query to the information browser;
 - e) returning a result of the search query;
 - f) determining whether the result includes any information of the second type; and
 - g) if the result includes any information of the second type, generating a visual representation of such information on the second window.
23. The man-machine interface method of claim 22 wherein the information browser is selected from a group consisting of (a) a browser for browsing HTML pages, (b) a browser for browsing documents, (c) a browser for browsing databased files, (d) a browser for browsing a schedule, (e) a browser for browsing a to do list, and (f) a browser for browsing contacts.
24. The man-machine interface method of claim 22 wherein the second window is a map, and wherein information of the second type includes places and addresses.
25. A man-machine interface for assisting a user in a decision making process, for use with a machine having a video monitor device and a user input device, the man-machine interface comprising:
 - a) a standby state in which a display including a simulated three dimensional environment having
 - i) a first window displaying first information of a first type, the first information defining an event, and
 - ii) a second window displaying second information of a second type, the second information being related to the event, is generated for rendering on the video monitor device;
 - b) a first window update state during which the user can update the first window by entering commands via the user input device;
 - c) a second window update state during which the user can update the second window by entering commands via the user input device;

- d) a first window focus view state in which a display including the first window, arranged in a normal head-on view, is generated for rendering on the video monitor device; and
- e) a second window focus view state in which a display including the second window, arranged in a normal head-on view, is generated for rendering on the video monitor device.

26. The man-machine interface of claim 25 wherein, when in the standby state,

- i) if a first user command is received from user input device, the first window update state is entered,
- ii) if a second user command is received from user input device, the second window update state is entered,
- iii) if a third user command is received from user input device, the first window focus view state is entered, and
- iv) if a fourth user command is received from the user input device, the second window focus view state is entered.

27. The man-machine interface of claim 26 wherein the first user command is locating a cursor over the first window, the second user command is locating a cursor over the second window, the third user command is clicking a maximize button of the first window, and the fourth user command is clicking a maximize button of the second window.

28. The man-machine interface of claim 26 wherein each of the first window focus view state and the second window focus view state include a world-in-miniature tool which includes a representation of the standby state.

29. The man-machine interface of claim 26 wherein, when in the first window focus view state,

- i) if a first user command is received from the input device, the standby state is entered, and
- ii) if a second user command is received from the input device, the second windows focus view state is entered.

30. The man-machine interface of claim 29 wherein the first user command is a click on a minimize button on the first window and the second user command is a flicking gesture.

31. A method for managing a man-machine interface, including

- a first window for displaying first information of a first type, the first information being related to an event, and
- a second window for displaying second information of a second type, the second information being related to the event,

for assisting a user in a decision making process, for use with a machine having a video monitor device and a user input device, the method comprising steps of:

- a) accepting user commands from the user input device;
- b) updating states of the first and second windows based on the user commands accepted;
- c) determining a state of the man-machine interface based on the user commands accepted; and
- d)
 - i) if the state of the man-machine interface is a standby state,
 - A) generating a display of a three dimensional environment including the first and second windows for rendering on the video monitor device, and
 - B) generating a visual link from the first information in the first window to the second information in the second window

- ii) if the state of the man-machine interface is a first window focus view state, generating a display of the first window in a normal, head on, view, and
- iii) if the state of the man-machine interface is a second window focus view state, generating a display of the second window in a normal, head on, view.

32. The method of claim 31 wherein the step of updating states of the first and second windows based on the user commands accepted includes steps of:

- i) generating an query based on at least one of the (a) the user inputs and (b) a user profile;
- ii) processing the query to generate a return; and
- iii) determining whether the return includes information of the first type or information of the second type, wherein if the return includes information of the first type, the first window is updated, and wherein if the return includes information of the second type, the second window is updated.

33. The method of claim 31 wherein the first window is a bulletin board, and wherein the step of updating states of the first and second windows based on the user commands accepted includes steps of:

- i) determining whether a cursor is on the first window and if so,
 - A) determining whether a note creation command was entered and if so, accepting text via the user input device;
 - B) determining whether a note edit command was entered and if so, editing a note based on entries from the user input device;
 - C) determining whether a note posting command was entered and if so,
 - generating a query based on the contents of the note,
 - processing the query to generate a return, and
 - determining whether the return includes an information of the

second type and if so, updating the second window; and

D) determining whether a note move command was entered and if so, updating a location of the note on the bulletin board.

34. (Amended) The method of claim 33 wherein the note creation command is a mouse click when a cursor is located over an empty part of the bulletin board,

wherein the note edit command is a mouse click when a cursor is located over an existing note on the bulletin board,

wherein a note posting command is a flicking gesture, and

wherein a note move command is a mouse drag.

35. The method of claim 33 wherein, if one of a note creation command and a note edit command is entered, further performing a step of displaying the note in a normal, head on, view in a foreground of the three dimensional environment.

36. The method of claim 31 wherein the first window is a map,

wherein the map includes a marker at a location associated with the event, and

wherein the step of updating states of the first and second windows based on the user commands accepted includes steps of:

i) determining whether a cursor is on the first window and if so,

 A) determining whether a marker delete command is entered and if so, deleting the marker from the map, and

 B) determining whether a marker move command is entered and if so, moving the marker on the map.

37. The method of claim 36 wherein if a marker move command is entered, the event is updated to reflect its new location.

38. The method of claim 31 wherein the first window is a calendar, wherein the calendar includes a number of alternative time lines, wherein the calendar includes an interval at a data associated with the event, in each of the alternative time lines, and

wherein the step of updating states of the first and second windows based on the user commands accepted includes steps of:

- i) determining whether a cursor is on the first window and if so,
 - A) determining a selected one of the alternative time lines,
 - B) determining whether an interval in the selected one of the alternative time lines is subject to a move command and if so, moving the interval,
 - C) determining whether an interval in the selected one of the alternative time lines is subject to a lengthen command and if so, lengthening the duration of the interval,
 - D) determining whether an interval in the selected one of the alternative time lines is subject to a shorten command and if so, shortening the duration of the interval,
 - E) determining whether an interval in the selected one of the alternative time lines is subject to a deletion command and if so, deleting the interval, and
 - F) determining whether an interval creation command is entered and if so, generating an interval in at least the selected one of the alternative time lines.

39. The method of claim 31 wherein if the state of the man-machine interface is the standby state, and if the first window is maximized, the first window focus view state is entered, and wherein if the state of the man-machine interface is the standby state, and if the second window is maximized, the second window focus view state is entered.

40. The method of claim 31 wherein if the state of the man-machine interface is the first window focus view state, and if the first window is minimized, the standby state is entered, and wherein if the state of the man-machine interface is the first window focus view state, and if a flicking gesture is entered, the second window focus view state is entered.

41. A system for assisting a user in a decision making process, the system comprising:

- a) an input facility for accepting user inputs;
- b) a processing facility for
 - i) accepting user inputs from the input facility,
 - ii) determining an event based on user inputs from the input facility,
 - iii) determining first information of a first type, the first information being related to the event,
 - iv) determining second information of a second type, the second information being related to the event,
 - v) determining a first window including a visual representation of the first information,
 - vi) determining a second window including a visual representation of the second information,
 - vii) generating a simulated three dimensional environment,
 - viii) determining a display state based on user inputs from the input facility, and
 - ix) generating video outputs including
 - A) the first and second windows arranged in the simulated three dimensional environment when a first display

state is determined,

- B) the first window, in a normal, head on, view when a second display state is determined, and
- C) the second window, in a normal, head on, view when a third display state is determined; and

- c) a video monitor unit for rendering the video outputs generated by the processing facility.

42. The system of claim 41 wherein the processing facility further updates states of the first and second windows based on the user commands accepted by the input facility.

43. The system of claim 42 wherein the processing facility updates states of the first and second windows by:

- i) generating a query based on at least one of the (a) the user inputs and (b) a user profile;
- ii) processing the query to generate a return; and
- iii) determining whether the return includes information of the first type or information of the second type, wherein if the return includes information of the first type, the first window is updated, and wherein if the return includes information of the second type, the second window is updated.

44. The system of claim 42 wherein the first window is a bulletin board, and wherein the processing facility updates states of the first and second windows by:

- i) determining whether a cursor is on the first window and if so,
 - A) determining whether a note creation command was entered and if so, accepting text via the user input device,
 - B) determining whether a note edit command was entered and if so, editing a note based on entries from the user input device;
- C) determining whether a note posting command was entered and if so,

- generating a query based on the contents of the note,
- processing the query to generate a return, and
- determining whether the return includes any information of the second type and if so, updating the second window; and

D) determining whether a note move command was entered and if so, updating a location of the note on the bulletin board.

45. The system of claim 44 wherein the note creation command is a mouse click when a cursor is located over an empty part of the bulletin board,

wherein the note edit command is a mouse click when a cursor is located over an existing note on the bulletin board,

wherein a note posting command is a flicking gesture, and
wherein a note move command is a mouse drag.

46. The system of claim 44 wherein, if one of a note creation command and a note edit command is entered, the note is displayed, on the video monitor, in a normal, head on, view in a foreground of the three dimensional environment.

47. The system of claim 42 wherein the first window is a map,
wherein the map includes a marker at a location associated with the event, and
wherein the processing facility updates states of the first and second windows by:

- i) determining whether a cursor is on the first window and if so,
 - A) determining whether a marker delete command is entered and if so, deleting the marker from the map, and
 - B) determining whether a marker move command is entered and if so, moving the marker on the map.

48. The system of claim 47 wherein if a marker move command is entered, the processing facility updates the event to reflect its new location.

49. The system of claim 42 wherein the first window is a calendar, wherein the calendar includes a number of alternative time lines, wherein the calendar includes an interval at a date associated with the event, in each of the alternative time lines, and wherein the processing facility updates states of the first and second windows by:

- i) determining whether a cursor is on the first window and if so,
 - A) determining a selected one of the alternative time lines,
 - B) determining whether an interval in the selected one of the alternative time lines is subject to a move command and if so, moving the interval,
 - C) determining whether an interval in the selected one of the alternative time lines is subject to a lengthen command and if so, lengthening the duration of the interval,
 - D) determining whether an interval in the selected one of the alternative time lines is subject to a shorten command and if so, shortening the duration of the interval,
 - E) determining whether an interval in the selected one of the alternative time lines is subject to a deletion command and if so, deleting the interval, and
 - F) determining whether an interval creation command is entered and if so, generating an interval in at least the selected one of the alternative time lines.

50. A tangible medium storing or communicating machine readable instructions which, when executed by a machine, performs steps of:

- (a) accepting an event from the user input device; and
- (b) generating a display for output on the video monitor device, the display including
 - (i) a first window displaying first information of a first type, the first information being related to the event, and
 - (ii) a second window displaying second information of a second type, the second information being related to the event.